

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 October 2004 (28.10.2004)

PCT

(10) International Publication Number
WO 2004/091520 A2

(51) International Patent Classification⁷:

A61K

[US/US]; 1111 Franklin Street, Oakland, CA 94607-5200 (US).

(21) International Application Number:

PCT/US2004/011333

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WITZTUM, Joseph, L.** [—/US]; 6912 Ofria Court, San Diego, CA 92120 (US). **CHANG, Mi-Kyung** [—/US]; 10860 Caminito Arcada, San Diego, CA 92131 (US). **SILVERMAN, Gregg, J.** [—/US]; 571 Hidden Ridge Court, Encinitas, CA 92024 (US). **SHAW, Peter, X.** [—/US]; 10860 Caminito Arcada, San Diego, CA 92131 (US). **BINDER, Christoph** [—/US]; 390 Stratford Court, Apt. 2, Del Mar, CA 92014 (US).

(22) International Filing Date: 12 April 2004 (12.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:
60/462,654

11 April 2003 (11.04.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

60/462,654 (CIP)

US

11 April 2003 (11.04.2003)

Filed on

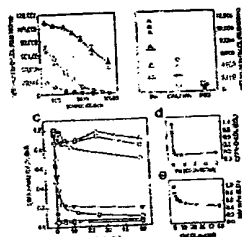
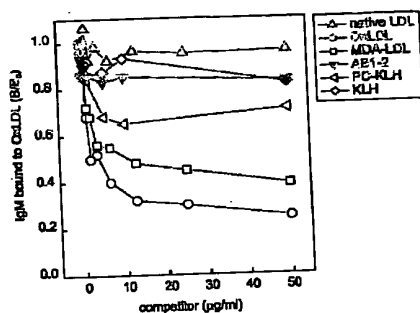
(74) Agent: **REED, Michael**; Fish & Richardson P.C., 12390 El Camino Real, San Diego, CA 92130 (US).

(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

[Continued on next page]

(54) Title: METHODS AND COMPOSITIONS FOR TREATING ATHEROSCLEROSIS



(57) Abstract: During the progression of atherosclerosis, autoantibodies are induced to epitopes of oxidized low-density lipoprotein (OxLDL), and active immunization of hypercholesterolemic mice with OxLDL ameliorates atherogenesis. The present studies have identified anti-OxLDL autoantibodies that share complete genetic and structural identity with antibodies produced by anti-phosphorylcholine B-cell clone, T15.



GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.